THE PROSPECT OF EXPORT FREIGHT FLOWS BETWEEN RAIL AND RIVER TRANSPORT REDISTRIBUTION AT THE EASTERN POLYGON

A team of authors from the Russian University of Transport (MIIT):
Prof. S.P. Vakulenko, Ph.
Prof. D.E. Kurenkov P.V.
Researcher Romensky D.Yu.
Researcher Romenskaya M.V.
Researcher Kalinin K.A.
Researcher Astafev A.V.
Researcher Moysievich N.V.

Moscow - 2021
Coal market

- Decrease in demand in the European market
- Increase in demand on the Far Eastern (Asian) market
- Stability of consumption inside Russia
- Positive mood of the domestic coal industry
- Opening of new mines, mines and surface mines in Kuzbass, Krasnoyarsk region, Khakassia, Buryatia, Transbaikalia, Amur region and Yakutia;
- Export predominantly by conservative logistic scheme: railroad + sea transport;

Destinations of the largest coal exports from Kuzbass in 2019 (source - Kuzbass Business Portal)
Organization of coal export

- Active production growth in the eastern regions of Russia, and especially in:
  - Yakutia (up to 80 million tons);
  - Kuzbass (more than 100 million tons);
  - Khakasia (up to 30 million tons);
  - Tyve (plans) (up to 30 million tons);
- Restrictions on the capacity of the Russian Railways network to export coal to the east are holding back the increase in production;
- Export to the west is possible, but less in demand by exporters;
- Large investment projects for the development of the infrastructure of the Russian Railways to increase the capacity

Export structure from coal mining regions in 2019

Source: FCS regional offices
Railways of the Eastern Polygon

Complex of railway lines (the main of which BAM and Transsib), in which hundreds of billions of rubles are invested to increase the capacity. Prospects for the third phase of the project are being discussed.

Russian Railways has constant difficulties with:
- Congestion on these lines;
- Disruptions in the work of port railway junctions;
- Work with empty wagons;
- With the execution of scheduled repair work on the railway infrastructure.

Urgent organization of a new high-capacity channel for exports in the eastern direction is required.
The Amur River Basin

• One of the largest rivers in the world - 2,824 km
• Fully navigable along with its large tributaries (1 and 2 classes of GDP)
• The shipping industry is currently underdeveloped (in decline due to lack of major shippers)
• Fleet is obsolete
• Convenient geographical location in Khabarovsk Krai, Jewish Autonomous District, Amur Oblast and Transbaikalia
• Can be used for export of products of numerous mining enterprises
• The boundary status of the river does not impose restrictions on navigation
Prospective logistic scheme

a) Logistic transportation scheme Kuzbass - export

- KUZBASS
- BURYATIA
- KHAKASSIA

- Heavy-duty freight train 80 mln. t
- Transfer Sretensk
- Shallow river vessel
- Transshipment to bulk carriers
- Seaports of the Far East

b) Logistic transportation scheme Neryngri - export

- Yakutia (Neryungri)

- Heavy-duty freight train 20 mln. t
- Transfer Dzhalinda
- Shallow river vessel
- Transshipment to bulk carriers
- Seaports of the Far East

b) Logistic transportation scheme Elga - export

- Yakutia (Elga)

- Heavy-duty freight train 45 mln. t
- Transfer Verkhnezeysk
- Shallow river vessel
- Transshipment to the lower side
- Seaports of the Far East
Geographical layout of the three most promising corridors
Thank you for your attention!

Russian University of Transport
Department «Transport Business Management and Intelligent Systems»
Prof. Kurenkov Petr Vladimirovich
petrkurenkov@mail.ru